

# jean-françois pambrun

researcher | engineer | software developer

## about

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## languages

french/english

## programming

java, javascript  
matlab, python  
linux, git, c, c++  
latex, tensorflow

## standards

dicom, ihe, hl7  
jpeg 2000, jpip

## interests

medical imaging  
image compression  
deep learning  
rendering

## education

2011-2016	<b>Ph.D. in electrical engineering</b> <i>improving medical image compression and transmission</i>	École de technologie supérieure (ÉTS)
2009-2010	<b>M.Sc. in electrical engineering (incomplete†)</b> <i>evaluation of the diagnostic quality of lossy compressed medical images</i>	École de technologie supérieure (ÉTS)
2005-2009	<b>B.ing. in electrical engineering</b> <i>information technologies and telecommunication</i>	École de technologie supérieure (ÉTS)

## experience

2016 (dec-)	<b>software developer</b> <i>cloud-based diagnostic workstation with client-side MPR</i>	nucleus.io
2016 (jun-dec)	<b>postdoctoral fellow</b> <i>MR-TRUS fusion and segmentation using deep neural networks</i>	CHUM research centre
2009-2016	<b>lecturer</b> <i>procedural programming (<a href="#">inf1005a</a>) software development environment (<a href="#">ele116</a>) image processing and analysis (<a href="#">ele747</a>)</i>	École polytechnique de montréal & ÉTS
2007-2014	<b>teaching assistants</b> <i>healthcare distributed systems (<a href="#">gts840</a>) software development environment (<a href="#">ele116</a>) image processing and analysis (<a href="#">ele747</a>)</i>	École de technologie supérieure (ÉTS)
2009 (jan-sep)	<b>software developer</b> <i>head-up display simulation for military flight simulators</i>	CAE inc.
2006-2008	<b>research assistant</b> <i>implementation of a standard compliance validation tool for hl7v3 implementation and evaluation of a medical image streaming framework</i>	École de technologie supérieure (ÉTS)

## awards

2017	<b>NSERC postdoctoral fellowship (declined)</b>	90,000\$
2017	<b>FRQNT postdoctoral fellowship (declined)</b>	70,000\$
2016	<b>GRSTB postdoctoral fellowship</b>	18,000\$
2011	<b>NSERC doctoral Alexander-Graham-Bell scholarship</b>	105,000\$
2011	<b>ÉTS excellence graduate student scholarship</b>	60,000\$
2011	<b>FRQNT doctoral research scholarship (declined)</b>	60,000\$
2009	<b>FRQNT master's research scholarship</b>	30,000\$
2006	<b>NSERC undergraduate student research awards</b>	4,500\$

† not a member of the OIQ

‡ fast-track doctoral  
admission without obtaining  
a master's degree

## publications

### articles in peer-reviewed journals

The utilization of MRI in the operating room

Ménard C , Pambrun J-F, Kadoury S

Brachytherapy. *Elsevier*, 2017

Computed Tomography Image Compressibility and Limitations of Compression Ratio-Based Guidelines

Pambrun J.F. , Noumeir R.

Journal of Digital Imaging. *Springer Science*, 2015

Teaching DICOM by Problem Solving.

Noumeir R. , Pambrun J.F.

Journal of Digital Imaging. *Springer Science*, 2012

Streaming of medical images using JPEG2000 interactive protocol

Pambrun J.F. , Noumeir R.

International Journal of Innovative Computing and Applications. 2012

Using JPEG 2000 Interactive Protocol to Stream a Large Image or a Large Image Set

Noumeir R. , Pambrun J.F.

Journal of Digital Imaging. *Springer Science*, 2010

### international peer-reviewed conferences/proceedings

Limitations of the SSIM quality metric in the context of diagnostic imaging

Pambrun J.F. , Noumeir R.

IEEE International Conference on Image Processing (ICIP), 2015

Compressibility variations of JPEG2000 compressed computed tomography

Pambrun J.F. , Noumeir R.

IEEE International Conference of the Engineering in Medicine and Biology Society (EMBC), 2013

Perceptual quantitative quality assessment of JPEG2000 compressed ct images with various slice thicknesses

Pambrun J.F. , Noumeir R.

IEEE International Conference on Multimedia and Expo, 2011

Interoperability testing of integration profiles based on HL7 standard version 3

Pambrun J.F. , Noumeir R.

IEEE International Conference on Information Technology and Applications in Biomedicine, 2010

Hands-on Approach for Teaching HL7 version 3

Noumeir R. , Pambrun J.F.

IEEE International Conference on Information Technology and Applications in Biomedicine, 2010

Streaming of Medical Images Using JPEG 2000 Interactive Protocol

Noumeir R. , Pambrun J.F.

IEEE International Conference on Systems, Signals and Image Processing. 2010

Interoperability Testing Software for Sharing Medical Documents and Images

Berube R. , Pambrun J.F, Noumeir R.

IEEE International Conference on Internet and Web Applications and Services. 2010

Images within the Electronic Health Record

Noumeir R. , Pambrun J.F.

IEEE International Conference on Image Processing. 2009